WHAT IS CLAIMED IS:

1. An automatic method of linearizing a color printing system, using measurements made with an optical sensor that is onboard the system, for forming images on plural printing media; said method comprising the steps of:

referring to a single calibration, used in common for substantially all the plural media, of the sensor; said single calibration being with respect to exclusively a single one of the plural media;

using the sensor, as calibrated by the single common calibration, to colorimetrically linearize the system for printing with each of plural colorants on any one medium, of the plural media; and

thereafter maintaining the system as thus linearized for printing on said one medium.

2. The method of claim 1, further comprising the step of:

repeating the using and maintaining steps for at least one other medium, of the plural media.

3. The method of claim 1, further comprising the step of:

repeating the using and maintaining steps for at least five others of the plural media.

4. The method of claim 1, further comprising the step of:

before the using step, performing the single common calibration using a particular one medium, of all the plural media, which has substantially greatest contrast between darkest full inking and unprinted area.

5. The method of claim 4, wherein the performing step comprises the substeps of:

providing a standard test pattern on the particular one medium;

employing a colorimeter to find perceptual-space reflectances of the test pattern;

operating the onboard optical sensor over the standard test pattern to obtain reflectance readings of the test pattern; and

tabulating the perceptual-space reflectances of the test pattern as a function of the onboard-sensor reflectance readings.

6. The method of claim 1, further comprising the step of:

before the using step, performing the single common calibration using a particular one medium; and wherein the performing step comprises the substeps of:

providing a standard test pattern on the one medium;

employing a colorimeter to find perceptual-space reflectances of the test pattern;

operating the onboard optical sensor over the standard test pattern to obtain reflectance readings of the test pattern; and

tabulating the perceptual-space reflectances of the test pattern as a function of the onboard-sensor reflectance readings.

7. The method of claim 6, wherein:

the providing step comprises printing a ramp with said plural colorants.

8. The method of claim 7, wherein:

the ramp-printing comprises printing with exclusively said plural colorants taken singly.

9. The method of claim 6, for a sensor that incorporates at least one illuminator; and wherein:

to stabilize illumination in the sensor, the operating substep comprises operating the at least one illuminator continuously before and during measurement of the ramps.

10. The method of claim 6, wherein the operating step comprises:

operating a plurality of representative onboard optical sensors in a plurality of systems; and

obtaining a statistical measure of results for the plurality of sensors and systems, to use as said reflectance readings for calibration of like onboard sensors generally throughout a product line of the systems.

11. The method of claim 6, wherein the operating step comprises:

operating a particular onboard optical sensor plural times in a single system, as part of factory processing of that system; and

obtaining a statistical measure of results for the plurality of operating times, to use as said reflectance readings for calibration of the particular onboard optical sensors in the single system.

12. The method of claim 6, wherein the operating step comprises:

automatically operating the onboard optical sensor in facilities of an end-user of the system, as part of routine maintenance of that system; and

automatically using results obtained in the end-user facilities as said reflectance readings for calibration of the end-user's system.

13. The method of claim 6, wherein the operating step comprises:

operating a plurality of representative onboard optical sensors in a plurality of systems; and

obtaining a statistical measure of results for the plurality of sensors and systems, to use as said reflectance readings.

14. The method of claim 1, wherein:

the referring step comprises referring to a single sensor calibration prepared using a graphics program, without optical measurements, from mathematical relationships among perceptual color-space parameters and tristimulus functions, for ideal inks.

15. The method of claim 1, wherein:

the using step provides CIELAB-space linearity in b* for yellow, and in L* for other colorants.

16. The method of claim 1, wherein the using step comprises the substeps of:

with each of the plural colorants respectively, printing a ramp of tonal patches at nominally specified tonal levels;

operating the calibrated onboard sensor to colorimetrically measure the ramps to determine actual tonal levels; and

for each of the plural colorants respectively, determining corrections for subsequent application at each nominally specified tonal level to linearize actually printed tonal levels.

17. The method of claim 16, wherein:

the operating step comprises measuring an unprinted area of said any one medium, of the plural media, as a reference white point for the linearizing.

18. The method of claim 16, wherein:

the ramp-printing substep comprises printing each respective ramp with negligible hue-angle variation along the ramp.

19. The method of claim 16, for a sensor that incorporates at least one illuminator; and wherein:

to stabilize illumination in the sensor, the operating substep comprises operating the at least one illuminator continuously before and during measurement of the ramps.

20. The method of claim 1, wherein:

said single calibration comprises plural subcalibrations for plural ink types respectively.

21. The method of claim 20, wherein:

said plural ink types respectively comprise pigment inks and dye inks.

22. An automatic method of linearizing and then using a color printing system, based upon measurements made with an optical sensor that is onboard the system, to form a color image on any one of plural printing media; said method comprising the steps of:

referring to a single calibration, used in common for substantially all the plural media, of the sensor; said single calibration being with respect to exclusively a single one of the plural media;

using the sensor, as calibrated by the single common calibration, to colorimetrically linearize the system for printing with each of plural colorants on any one medium, of the plural media; and

thereafter using the system without further sensor calibration to form a properly colorimetrically linearized image on any different one medium, of the plural media.

23. The method of claim 22, wherein:

of all the plural media, said single one has greatest contrast between darkest full inking and unprinted area.

24. The method of claim 22, further comprising the step of:

before the using step, performing a dynamic-range adjustment.

25. The method of claim 22, for a sensor that incorporates at least one illuminator; and wherein:

to stabilize illumination in the sensor, the using step comprises operating the at least one illuminator continuously before and during measurement of the ramps.

26. A printer for forming images on plural printing media; said printer comprising:

an optical sensor that is onboard the system;

first processor portions for performing a first program that operates the printer and sensor to develop a single calibration of the sensor with respect to exclusively a single one of the plural media, but for use in common with substantially all the plural media;

second processor portions for performing a second program that operates the printer, and the sensor as calibrated by the single common calibration, to colorimetrically linearize the system for printing with each of plural colorants on any one medium, of the plural media; and

a memory for thereafter maintaining linearization data, for the printer as thus linearized, for printing on said any one medium, of the plural media.

27. An automatic method of calibrating an optical sensor and using the sensor to linearize a color printing system that forms images on plural printing media; said method comprising the steps of:

deriving a single sensor calibration from ideal properties of color inks, without making any optical measurement using the sensor;

referring to the derived single calibration, used in common for substantially all the plural media;

using the sensor as calibrated by the single common calibration to colorimetrically linearize the system for printing with each of plural colorants on any one medium, of the plural media; and

thereafter maintaining the system as thus linearized for printing on said one medium.